



**U.S. Department of Justice**

**Bureau of Alcohol, Tobacco,  
Firearms and Explosives**

*Martinsburg, WV 25405*

[www.atf.gov](http://www.atf.gov)

907020:MRC  
3311/302558

**APR 13 2015**

**Ruble**

**Dear Mr. Ruble:**

This refers to your recent correspondence and submission of a physical sample along with a power point to the Bureau of Alcohol, Tobacco, Firearms and Explosives (ATF), Firearms Technology Industry Services Branch (FTISB), Martinsburg, West Virginia. Specifically, you ask FTISB to evaluate your prototype design and determine its classification under Federal law.

The Gun Control Act of 1968 (GCA), 18 U.S.C. Section 921(a)(3), defines the term "firearm" as follows: "... (A) any weapon (including a starter gun) which will or is designed to or may readily be converted to expel a projectile by the action of an explosive; (B) the frame or receiver of any such weapon; (C) any firearm muffler or firearm silencer; or (D) any destructive device. Such term does not include an antique firearm."

Additionally, the National Firearms Act (NFA), 26 U.S.C. Section 5845(b), defines "machinegun" as—

"...any weapon which shoots, is designed to shoot, or can be readily restored to shoot, automatically more than one shot, without manual reloading, by a single function of the trigger. The term shall also include the frame or receiver of any such weapon, any part designed and intended solely and exclusively, or combination of parts designed and intended, for use in converting a weapon into a machinegun, and any combination of parts from which a machinegun can be assembled if such parts are in the possession or under the control of a person."

You have submitted to FTISB a prototype AR-style rifle with newly designed fire control components that you describe as a "positive reset trigger." In your submission you identify the following fire control components:

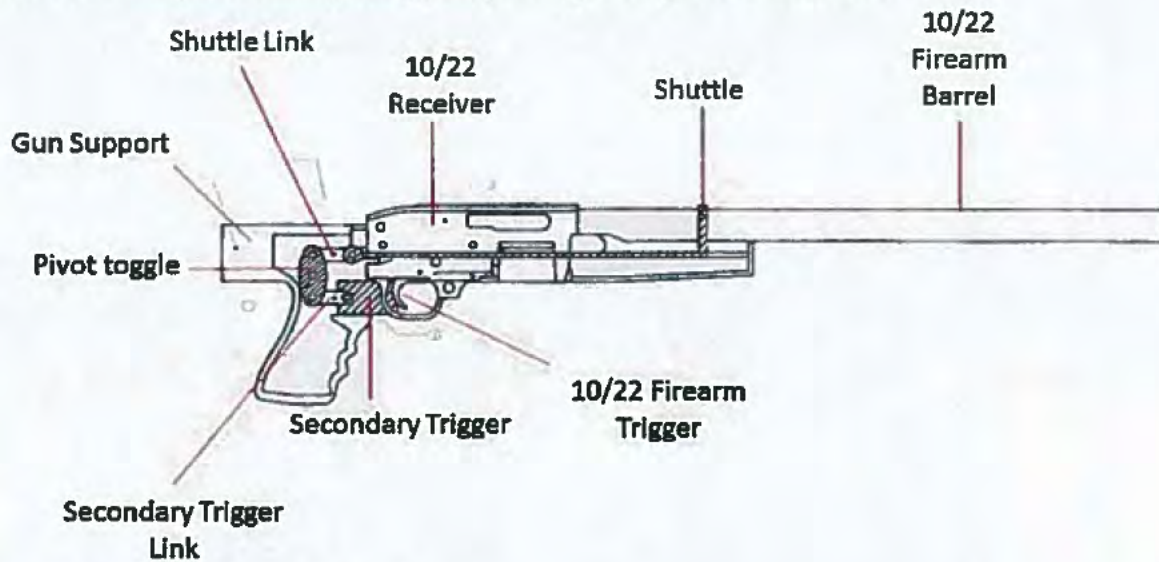
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██████ Ruble

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- Gun support/gun stock
- Secondary trigger
- Secondary trigger link
- Pivot toggle
- Shuttle link
- Shuttle

The internal components comprising your prototype design are shown here:



You provided the prototype shown here:

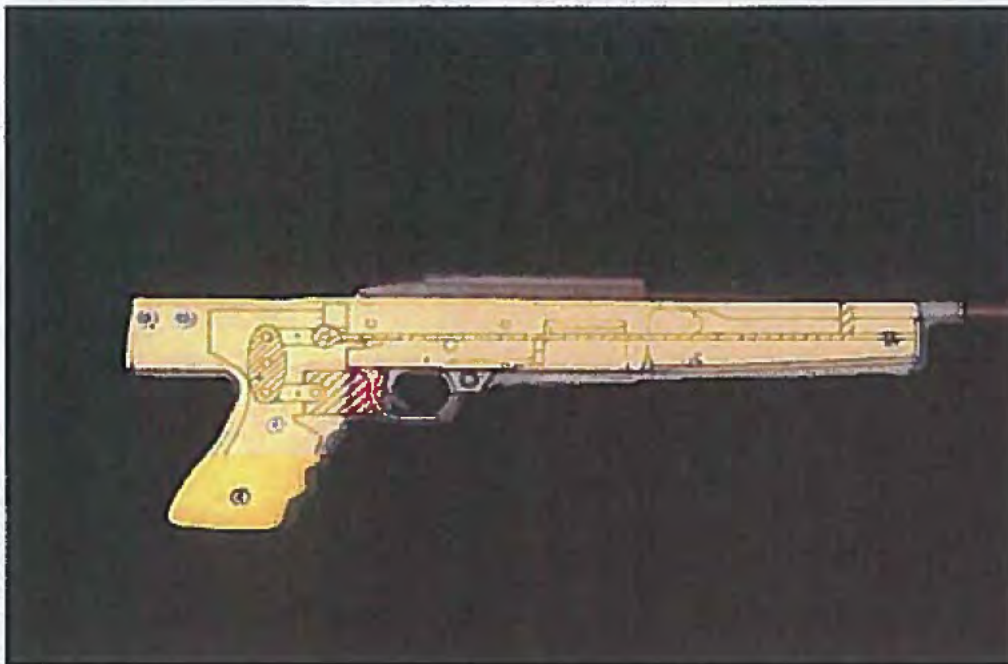


The internal components are shown here as they would exist inside the prototype.



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The cycle of operation of your prototype is shown below.



After the trigger is pulled, a projectile is expelled and the firearm barrel and receiver recoil, moving each backward (step 1, below). The shuttle, also attached to the barrel, moves backward in concert (step 2). The backward movement of the shuttle pushes the shuttle link and the top end of the pivot

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toggle (step 3). The pivot toggle rotates, pushing the secondary trigger link forward (step 5). Finally, the secondary trigger is pushed forward, moving the trigger finger forward as well. Each of these steps happens automatically as a result of the recoil energy generated from firing a projectile.



In step 6 above, the forward movement of the secondary trigger pushes the finger forward countering the constant rearward pressure applied by the shooter. The 10/22 trigger moves forward as well.



In the normal operation of the 10/22, the trigger would move forward only when the shooter releases the trigger. However, the prototype design utilizes recoil energy to move the trigger finger. In this way, the shooter can maintain constant pressure through a single pull of the trigger.

Once the recoil energy has dissipated, the shooter's constant rearward pressure pushes the secondary trigger backward (step 1, below). In turn, this moves the secondary trigger link (step 2), rotates the pivot toggle (step 3), and pushes the shuttle link and shuttle forward (step 4). The shuttle moves the receiver and barrel forward.





At this point the 10/22 receiver is capable of firing a second projectile (see below). The constant rearward pressure applied by the shooter's trigger finger fires the subsequent projectile, and the process repeats itself until the shooter finally releases the rearward pressure.



As stated above, the NFA defines machinegun, in relevant part, as "any weapon which shoots...automatically more than one shot, without manual reloading, by a single function of the trigger." ATF has long held that a "single function of the trigger" is a single "pull" or, alternatively, a single "release" of the trigger. Therefore, a firearm that fires a single projectile upon a pull of the trigger, and fires a single projectile upon the release of that trigger would not be classified as a "machinegun" under Federal law.

Upon review, we find that your prototype permits a shooter to fire automatically, more than one shot, without manual reloading, by a single function of the trigger. Your design utilizes recoil energy to move the shooter's finger and permits the firearm to reset. However, your prototype actually utilizes the single pull of the trigger to accomplish this. In this way, the prototype design uses a single

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function of the trigger to operate the design and causes an otherwise semiautomatic firearm to fire more than a single projectile automatically.

ATF has long held that a single function of the trigger results from a single action by the shooter to initiate the firing sequence, whether it is a push or a pull movement.

Based on our evaluation and provisions of Federal law cited above, FTISB concludes that the prototype design is a combination of parts designed and intended for use in converting a weapon into a machinegun. It is therefore a "machinegun" as defined in the above-cited § 5845(b).

We thank you for your inquiry and trust that the foregoing has been responsive.

Sincerely yours,

A handwritten signature in dark ink, appearing to read 'M. Kingery', is written over the typed name.

Max M. Kingery  
Acting Chief, Firearms Technology Industry Services Branch

AR000311





**U.S. Department of Justice**

**Bureau of Alcohol, Tobacco,  
Firearms and Explosives**

Martinsburg, WV 25405

www.atf.gov

907010: RKD  
3311/303845

OCT 07 2016

Saint Kings Technologies, LLC.

Dear Mr. Santos-Reis:

This is in reference to your submission and accompanying correspondence to, Bureau of Alcohol, Tobacco, Firearms and Explosives (ATF), Firearms Technology Industry Services Branch (FTISB), which is accompanied by two AR-15 type rifles equipped with what is described as LV-15 Trigger Reset Devices (see enclosed photos).

As you know, the National Firearms Act (NFA), 26 U.S.C. § 5845(b), defines the term "machinegun" as—

*...any weapon which shoots, is designed to shoot, or can be readily restored to shoot, automatically more than one shot, without manual reloading, by a single function of the trigger. The term shall also include the frame or receiver of any such weapon, any part designed and intended solely and exclusively, or combination of parts designed and intended, for use in converting a weapon into a machinegun, and any combination of parts from which a machinegun can be assembled if such parts are in the possession or under the control of a person.*

The submitted devices, are described as "trigger reset devices." You further describe the design and function of the devices as "a trigger actuating device that aids the user of an AR type rifle in pulling the trigger faster." As a part of this description, you note that the submitted device is "an electronic device that used a rechargeable battery. The principle of the device is as follows: After the trigger is pulled and the rifle fired, the device pushes the trigger forward rapidly to reset the trigger, so that the user can pull the trigger faster."

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The first sample examined by FTISB personnel consists of a Bushmaster model XM15-E2S .223-5.56 caliber AR-15 pattern rifle, serial number L476739, which is equipped with the following items:

- A self-contained trigger mechanism within an aluminum housing, being equipped with an electrical connection.
- A modified two position semiauto AR-15 type selector lever.
- An 11.1V 1200MAH rechargeable battery pack.
- A grip assembly with trigger guard having electrical connections and a piston which projects forward through the lower rear portion of the trigger guard and pushes the trigger forward as the firearm cycles.
- A grip attachment screw/bolt and straight pin.
- Several extra battery assemblies and a "Tenergy" charging assembly.
- One extra LV-15 trigger/grip/selector assembly.

The second sample, submitted at a later date, consists of an Anderson Manufacturing model AM-15, 5.56 caliber AR-15 pattern rifle, serial number 15272793, equipped with a similar "improved" version of the device. This version was noted to incorporate a three position selector rather than the two position selector featured on the first sample.

The written correspondence received with the samples provided the following statements in steps 4 thru 9, offering a description of how the device differed in function from that of a standard unmodified AR-15 pattern rifle:

4. *"The fourth step is where the process first differs from a normal AR-15 trigger group. As the hammer is reset and engaged past the disconnecter, it also engages the sensor that is mounted behind the trigger group. This sends a signal to the control circuit and will continue sending that signal until it is released. For now, the control circuit, will not do anything, it waits until it stops receiving the signal."*

5. *"As the bolt-carrier starts moving forward, it reaches a point where it releases the hammer and allows the hammer to be captured by the disconnecter. Around the point where the hammer is allowed to rest on the disconnecter is when it disengages the sensor. Once the sensor is disengaged and stops sending the signal to the control circuit, the control circuit begins a timer which lasts about 35 milliseconds."*

6. *"With the timer still counting down, the bolt carrier group finishes travelling forward, having chambered a round, and the rifle is now in battery and ready to fire."*

7. *"The seventh step occurs when the timer finishes counting down that 25 millisecond delay. Once the count-down is over, it turns on the solenoid for 15 milliseconds. As the solenoid turns on, the solenoid rod is going to try to push forward on the trigger, pushing it back to the firing position. However, the solenoid can only exert so much force. Therefore, the trigger will only reset if the user allows it to, by not exerting more than 12 pounds of force during said 15 millisecond interval."*



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8. *"The final step takes place once the user has allowed the trigger to move forward enough, at which time the disconnecter will release the hammer and allow it to set on the main sear, again just like in any AR-15. While the user must still allow the trigger to physically move forward to reset, the only difference is that here the user is being assisted in order to reset the trigger faster."*

9. *"After the trigger has reset the rifle does not continue to shoot automatically, as the trigger is forced back into the ready/cocked position, the user, as in all mechanical reset devices, must consciously pull the trigger if he/she desires to fire another round. Each pull of the trigger represents a separate and conscious decision by the operator to fire another round. If the user does not pull the trigger again, the rifle will not fire again."*

When the trigger was pulled slowly and retained in a position at which the hammer was just release with the device actuated during manual field testing, a condition resembling automatic cycling was observed on several occasions, during field testing of the LV-15 equipped firearm. Actual test firing with live ammunition replicated this same condition.

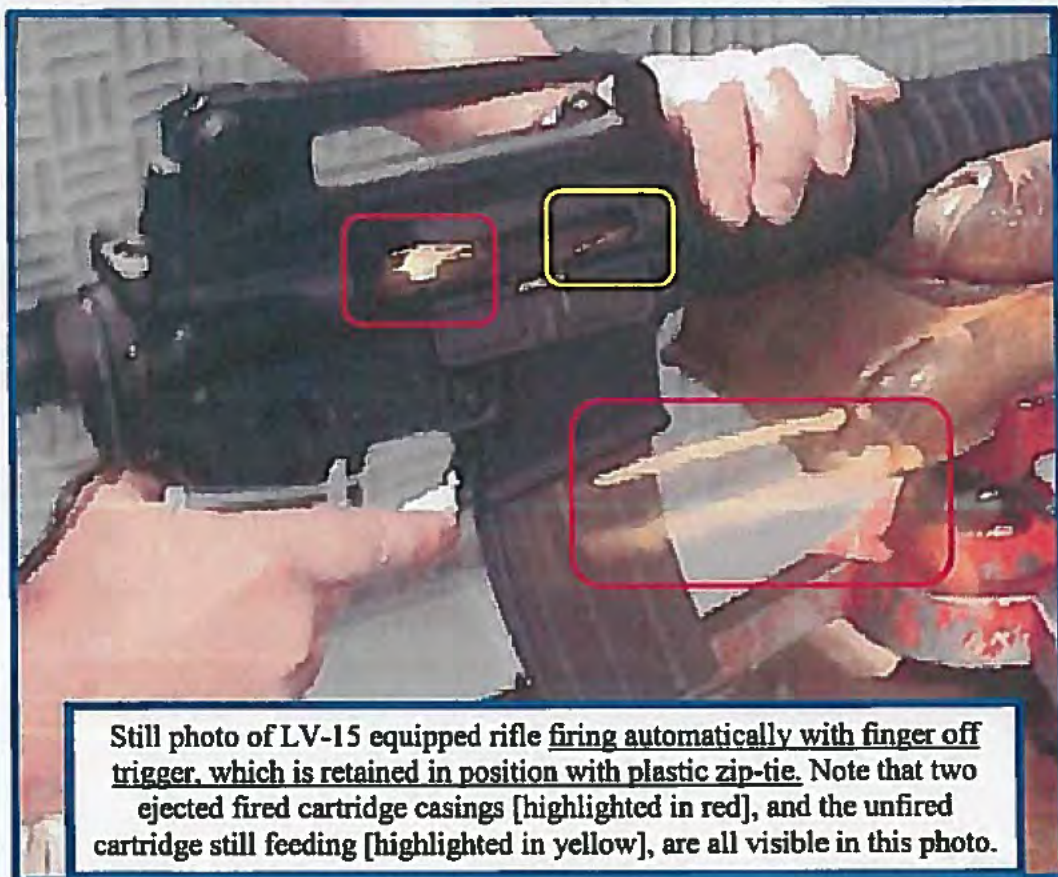
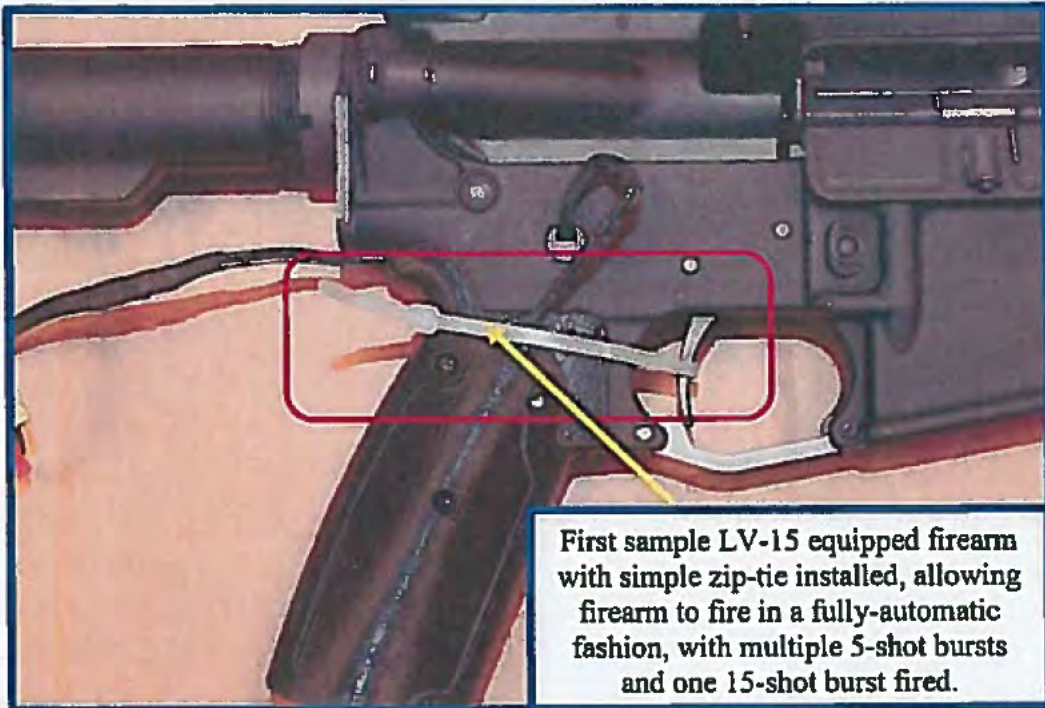
In order to ensure that the LV-15 equipped firearm was actually firing more than one shot, without manual reloading, with a single function of the trigger, rather than firing a single shot with each function of the trigger, the following procedure was followed.

- A common 9-3/4 inch zip-tie was installed around the rear of the grip and the front of the sample's trigger.
- The zip-tie was gradually tightened until the trigger was retracted just enough to allow the hammer to fall.
- With the trigger retained in this position, the bolt assembly was retracted and retained in an open position, with the aid of the bolt catch.
- A five-round ammunition load was placed into the sample's magazine and the magazine was inserted into the firearm.
- Without touching the trigger (which was being retained in a fixed position by the plastic zip-tie), the bolt catch was depressed allowing the firearms bolt to travel forward and chamber a cartridge. Upon chambering the cartridge the weapon fired the entire five-round ammunition load automatically without the trigger being repeatedly pulled and released.
- This same test was repeated several times with a five- round ammunition load and once with a fifteen-round ammunition load. In all instances, the LV-15 equipped firearm discharged its entire ammunition load upon initiating the firing sequence by depressing the bolt release, thus allowing the bolt assembly to move forward and both chamber and fire cartridges repeatedly.



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FTISB testing with the trigger of the LV-15 equipped firearm pictured on the previous page, retained in the static position shown with a plastic zip-tie, revealed that the LV-15 device could allow a semiautomatic AR-15 type firearm to fire automatically more than one shot, without manual reloading, by a single function of the trigger.



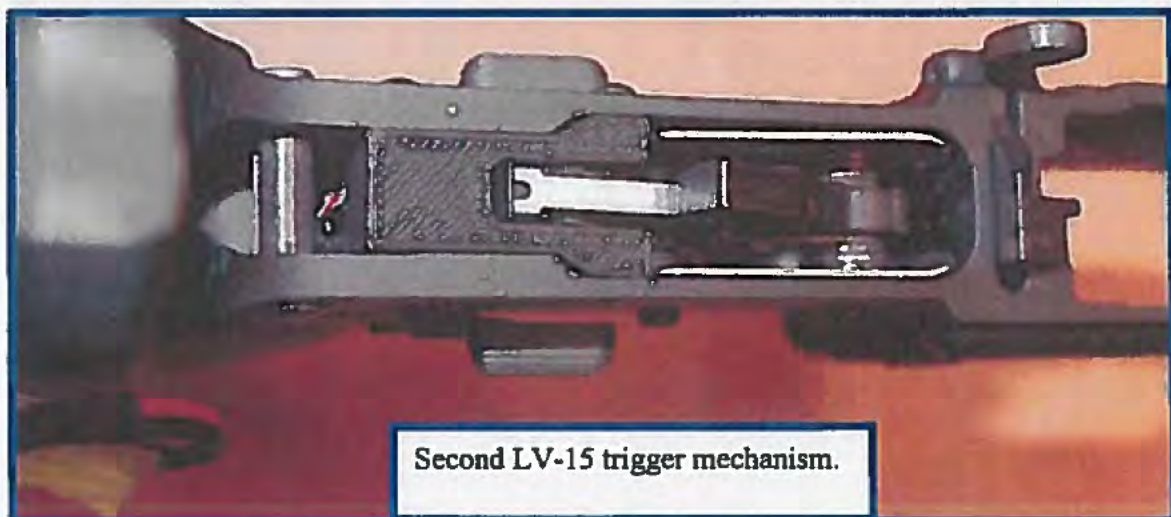
FTISB next proceeded with an examination of the second LV-15 equipped firearm, which was submitted on April 6, 2016. This second prototype is described as being functionally identical to the previous model pictured above, featuring *"small improvements that have come as the result of further development since the original submission."* The LV-15 device equipped rifle initially manually field tested and appeared to operate similarly to the first version of the LV-15 examined. Shortly after testing began, the LV-15 device ceased operating. Both recharging the original battery and substituting a different recharged battery failed to return the device to operational status. Due to the aforementioned deficiency, FTISB personnel terminated testing of the submitted device.

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Although testing of the second device could not be completed because of the malfunction, it is designed, and operates, in the same way as the first submitted device. As a result of the subject test weapon firing more than one shot, without manual reloading, by a single function of the trigger with the submitted device installed, the submitted LV-15 devices are classified as a combination of parts designed and intended, solely and exclusively, for use in converting a weapon into a machinegun and thus a "**machinegun**" as defined in 26 U.S.C. § 5845(b). This classification is based on an evaluation of the item as submitted and that the item converts a weapon to fire automatically, regardless of how reliably it shoots automatically more than one shot, without manual reloading, by a single function of the trigger.

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As stated above, Federal law defines “machinegun,” in relevant part, as “any weapon which shoots, is designed to shoot, or can be readily restored to shoot, automatically more than one shot, without manual reloading, by a single function of the trigger” as well as a “combination of parts designed and intended, for use in converting a weapon into a machinegun.” Legislative history for the NFA indicates that the drafters equated a “single function of the trigger” with “single pull of the trigger.” National Firearms Act: Hearings Before the Comm. on Ways and Means, House of Representatives, Second Session on H.R. 9066, 73rd Cong., at 40 (1934). Therefore, ATF has long held that a single function of the trigger is a “single pull” or, alternatively, a single release of a trigger. Therefore, a firearm is not a machinegun if a projectile is expelled when the trigger is pulled and a second projectile is expelled when the trigger is released.

To initiate firing using the LV-15, a shooter must simply pull the trigger (photo 1—note that the solenoid rod is inside the firearm. These photos show the approximate location of the rod in the firearm. This is done simply to explain the functioning of the device). After firing, and when the bolt has loaded a second round of ammunition (photo 2-3), the mechanical-electrical operation of the LV-15 trigger device utilizes a “solenoid rod” to push the trigger forward as if the shooter had released the trigger (photo 4). Although the trigger is pushed forward the shooter never releases the trigger. Pursuant to your explanation, the shooter must merely maintain a pull that exerts “not more than 12 pounds of force during said 15 millisecond interval.” If the shooter maintains this pressure, a second shot is fired (photo 5). As stated above, firing requires so little input from the shooter—a single pull with constant pressure—that a zip tie can effectively fire a weapon utilizing the LV-15 until the ammunition source is exhausted. A shooter need only pull the trigger once to initiate firing, and the LV-15 then operates automatically to continue firing.



*Photo 1 obtained from customer supplied video of rifle utilizing CMMG .22LR conversion device.*

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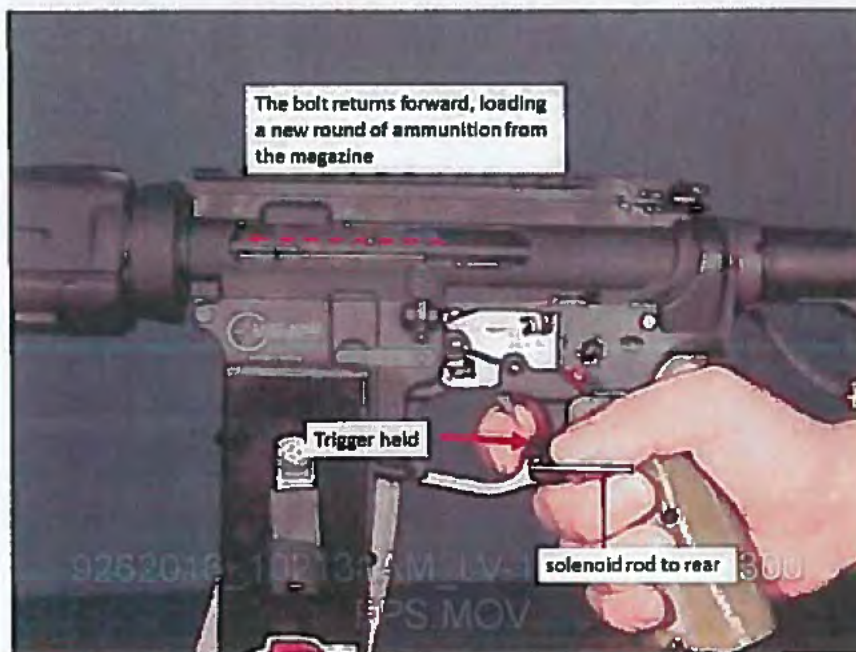


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*Photo 2 obtained from customer supplied video of rifle utilizing CMMG .22LR conversion device.*



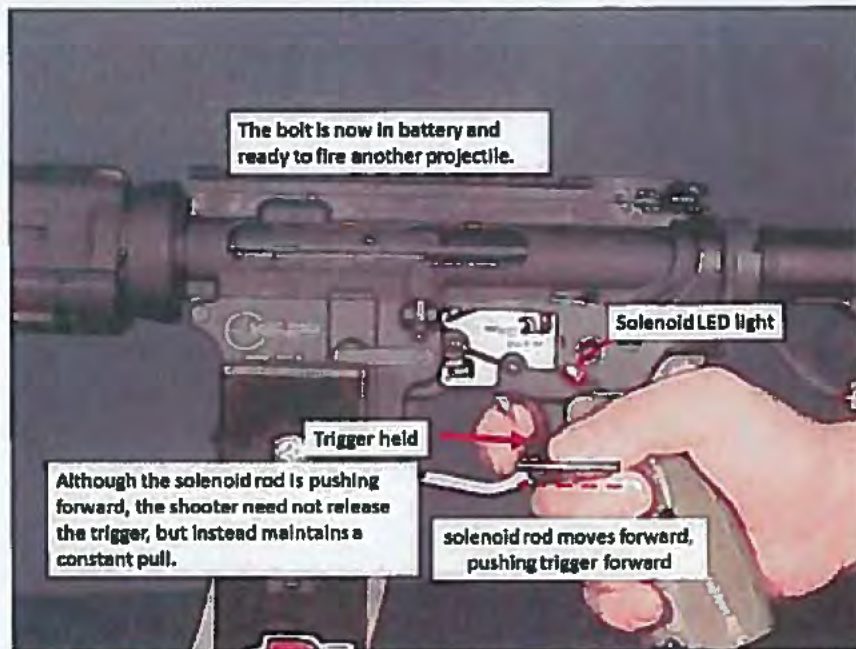
*Photo 3 obtained from customer supplied video of rifle utilizing CMMG .22LR conversion device.*

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*Photo 4 obtained from customer supplied video of rifle utilizing CMMG .22LR conversion device.*



*Photo 5 obtained from customer supplied video of rifle utilizing CMMG .22LR conversion device.*

This Branch has previously approved certain devices sometimes known as “bump fire” stocks in which a shooter pulls the trigger and applies forward pressure with the non-

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trigger hand to fire additional projectiles. To function as designed, the trigger must be pulled and held without release. After it fires the first projectile, the firearm recoils and pushes rearward, sliding back in the stock. Although the shooter maintains constant pull on the trigger, the backward movement of the firearm relative to the trigger causes the trigger to reset, as if the trigger had been released. The firing sequence will stop at this point unless the shooter maintains forward pressure on the firearm with his non-shooting hand. This forward pressure moves the firearm forward relative to the trigger and causes a second projectile to fire. Whereas, in the case of typical firearms, a trigger must be pulled backward to fire a projectile, in the case of bump fire stock, the second and subsequent shots operate by keeping the trigger in place and moving the firearm forward.

This Branch approved these devices, but this was in spite of the fact that the devices utilize a "single function of the trigger." As was explained in those classification letters, these items were not classified as machineguns because the stocks had no automatically functioning mechanical parts or springs and performed no automatic mechanical function when installed. A weapon is a machinegun if it shoots, is designed to shoot, or can be readily restored to shoot, *automatically* more than one shot, without manual reloading, by a single function of the trigger. Because the shooter was required to provide the forward pressure with his hand, the firearm did not function "automatically." The LV-15 does operate automatically, as it uses an electrical-mechanical device to automatically cycle the trigger forward against the initial trigger pull, thus allowing the LV-15 equipped firearm to automatically fire.

Please be aware, our Branch has also evaluated similar devices which have prevented the trigger from positively resetting and resulted in a "hammer-follow" scenario. A device designed to prevent the hammer from positively resetting could cause a firearm to shoot automatically more than one shot, without manual reloading, by a single function of the trigger, and would also be classified as a combination of parts designed and intended, solely and exclusively, for use in converting a weapon into a machinegun; thus a "machinegun" as defined in 26 U.S.C. § 5845(b).

FTISB finds that the host AR-type firearms, Bushmaster AR-type receiver serial number L476739, and Anderson Manufacturing AR-type receiver serial number 15272793, not having any modifications made which would cause them to fire automatically, or incorporating the frame or receiver of a machinegun, are not "machineguns" as defined in 26 U.S.C. § 5845(b).

The subject Bushmaster and Anderson Manufacturing firearms will be returned to you as soon as our Branch has received either a FedEx account number, or a FedEx or alternate carrier prepaid return label. Please advise our Branch within 60 days of receipt of this letter regarding the disposition of these firearms. The submitted LV-15 devices, which are classified as "machineguns" as defined in 26 U.S.C. § 5845(b), cannot be returned to you unless you are a licensed firearms manufacturer who has paid the Special Occupational Tax (SOT).

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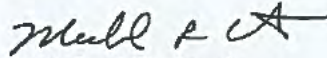


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We trust the foregoing has been responsive to your current evaluation request and regret that our written response was delayed due to FTISB's current workload.

Sincerely yours,



Michael R. Curtis

Chief, Firearms Technology Industry Services Branch

Cc:



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